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Agriculture

PRIMER FOR TOWN FARMERS

Wednesday, December 7, 1932

FOR BROADCAST USE ONLY

Speaking Time: 10 Minutes.

All Regions.

ANNOUNCEMENT: Another Wednesday has rolled around. And it's time now for Station ________ to present Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS, from the United States Department of Agriculture. The subject for this week is the PROPAGATION OF PLANTS.

---o---

I'm not a fortune teller or a magician. Neither do I believe in a man's ability to change duck eggs into white rabbits or carrier pigeons into drinking water.

But when it comes to reproducing a half dozen nice plants from one simple begonia leaf--- Well, that's bordering on magic.

The PROPAGATION or the REPRODUCTION of plants and animals is one of the most interesting studies in the world. The study is interesting because it deals with life itself, and because we don't understand all the mysteries of reproduction or propagation. To my way of thinking there is something almost mysterious about a leaf that has the ability to change itself into a half dozen growing plants. But that's what some leaves can do. And that's why so many people like to plant seeds and grow things. They like to experiment in the field of reproduction. Let me illustrate.

As I came in from the office the other evening I noticed several small flower pots filled with sand in one of the windows of our living room. I investigated. And in each pot I found a number of what appeared to be little plants, covered with inverted water tumblers from the table.

I say what appeared to be little plants because they were really NOT plants at that time. They were simply cuttings stuck in the sand.

I asked Mother Thompson for information, and she said she was starting some cuttings of begonias, gernaiums, and other spring-bedding plants. She took the cuttings or "slips" as some people call them from some of her potted plants in the sun parlor and put them in the sand to form roots, and make new plants.

Well, after supper Mother Thompson and I called on our friend and garden adviser W.R.B. He lives in our block. And what do you suppose we found in the windows of his living room? Sandboxes, and water tumblers. He had the propagation fever too.

In one of his boxes he had a big begonia leaf spread out on the sand, and the edges of the leaf fastened down with toothpicks. He explained to us that certain varieties of begonias may be propagated from leaf cuttings, and that the

little baby plants grow from the edges of the leaf. After these little plants form roots of their own you can cut them apart and set each plant in a separate pot.

Mother Thompson and I have been propagating plants from cuttings for a long time, but we lose of number of cuttings nearly every year from what Mother Thompson calls "black foot." The foot or bottom of the stem turns black and decays. That's just what it does, it rots before it forms roots. The trouble is cold sand. Cold air comes in around the window sash and that keeps the sand cold. Not very cold, of course, Say around 50 or 55 degrees. But 50 degrees is too cold to root tender cuttings like gernaiums, begonias, and coleus.

We tried the sand boxes on top of the radiator one winter. But that was too hot. It cooked the plants. I asked W.R.B. how he solved the cold sand problem. His face lit up with a smile. Then he said:

"Cold sand problem? That's easy. I solved that 3 years ago. Come on, and I'll show you." And he led the way into the kitchen.

There just inside the east window was a queer contraption that looked like the lower part of a discarded kitchen cabinet. It was completely enclosed and had two small doors in front just like a cabinet. The top of this cabinet was covered with a large piece of glass. Under the glass was a bed of sand. In the sand were cuttings. Large numbers of cuttings of different kinds of flowering plants. And they were growing too. W.R.B. lifted one of the cuttings from the sand with the point of his knife and the bottom end of the cutting was literally covered with young roots. No trouble from cold sand there. The temperature of his sand was ideal. He had a thermometer with the bulb end in the sand and the top end above the sand so that the temperature could be read. I was curious. I put on my glasses and looked at the scale on the thermometer. I wanted to find out how hot he kept his sand.

Well, what do you suppose I found? I found the mercury column standing at exactly 78 degrees. Then I was puzzled, so I asked for information. I said, where do you get that heat?

W.R.B. laughed and opened the two doors in the front of the cabinet. And there was the answer. Two 60 watt electric light bulbs were burning away making heat to keep the sand bed warm.

Then he explained that the bottom of the sand box was made of sheet iron so that the heat would go up through the sand and keep it warm. The inside of the cabinet below the sand box was lined with asbestos paper. That was to prevent fire, and to conserve the heat.

The whole outfit had been built from an old kitchen cabinet. The cost was $1.20. Twenty cents for the asbestos paper, ninety cents for the two light bulb and the cord, and ten cents for the sheet iron. It was simple, very simple, but it warmed the sand. And warm sand makes cuttings grow, and form roots, and that' what you want.

I've never had much trouble getting the "soft-wood" cuttings like geranium begonias, and coleus to take root and grow when I provided the proper conditions of heat, light, and water. But I have had trouble with the woody shrubs, like

roses, mock orange, spirea, lilac, weigela, and hydrangea. I have found the woody shrubs rather difficult to root unless you can control the temperature of the sand. If you can do that they'll root in a short time.

Cuttings from the woody shrubs form what is known as "callouses." That's the first thing they do after they get in the sand box. And they have to do that too. A callous is a sort of corky substance that forms on the lower end of the woody cutting. So if you find callouses forming on the ends of cuttings you can feel reasonably sure that you have won, and that they are "striking" roots as nurserymen say. But don't expect woody shrub cuttings to callous over in a few days. They don't work that fast. Woody shrub cuttings root much slower, oh, yes, a great deal slower than the soft wood cuttings.

For most cuttings you can use clean, washed sand. But be sure the sand is sharp. That's for drainage. And drainage is very important. If you don't provide the proper drainage and ventilation for your cuttings they'll die from what is known as "damping off." A soft ring forms around the cutting at the top of the sand, and the cutting dies, usually before it "strikes" roots. But good drainage and ventilation usually will avoid that trouble.

I have been very successful in rooting coleus, and other soft wood cuttings by first putting a layer of rich soil in the bottom of the sand box and then covering that with a layer of clean, sharp sand. I then put in the cuttings. They go in the sand only. The end of the cutting goes down pretty close to the layer of rich soil, but it doesn't touch the soil. It stops in the sand just above the soil. When the roots form, they naturally go downward in search of food. And they find it close at hand in the rich soil. That starts them off and produces a good root growth and a few leaves by that time they are ready to be removed from the bed. That's about all there is to propagation. But let's run over the main points again to make sure they stick. Here we go.

First, use clean, sharp sand for rooting cuttings.

Second, keep the sand warm, and control the temperature if you can.

Third, provide drainage in the sand box.

Fourth, keep the sand moist, but don't let it "water log."

And finally, keep the cutting box in a sunny window if possible.

That's all for today. And now until this time next Wednesday Mother Thompson and I beg to remain, yours for better cuttings.

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ANNOUNCEMENT: This is Station _______ in __________ concluding Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. The Neighbor will be back on the air at this time next Wednesday. His subject for next week is POULTRY.

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PRIMER FOR TOWN FARMERS

Wednesday, December 14, 1932.

FOR BROADCAST USE ONLY.

Speaking Time: 10 Minutes.

All Regions.

ANNOUNCEMENT: This is Station __________ in __________________. Our next presentation is a weekly agricultural feature for city farmers from the United States Department of Agriculture. This program is known to radio listeners as Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS. The subject of this week's talk is POULTRY RAISING IN THE BACK YARD.

---oOo---

This is the middle of December. And the time of year when successful poultrymen talk about direct sunshine, cod-liver oil, and the value of vitamin D in the winter laying ration.

Here is a man who has a flock of 32 laying hens in his back yard, and wants to know "What is vitamin D? And why is vitamin D so important in the winter laying ration?"

Well, there you are. That's a good question.

First, let's try to define vitamin D. What is vitamin D? Nobody knows. We recognize vitamin D by what it does, but we can't see it. It's invisible, but it has a powerful punch. We get the effects of vitamin D naturally in the ultra-violet rays of direct sunlight, and also from certain fish oils such as cod-liver oil, and sardine oil.

The way vitamin D affects hens was first determined by Prof. J.G. Halpin head of the poultry department of the Wisconsin College of Agriculture. That was only a few years ago too. Here's the way the professor did it.

He kept two groups of hens confined in a house. He exposed one group to ultra-violet light for ten minutes a day from February to June. He handled the other group of hens in exactly the same way as the first group except for ultra-violet light. The first group of hens got ultra-violet light for ten minutes a day, while the second group of hens got no ultra-violet light at all. That was the only difference.

Now for the results. The hens that were exposed to ultra-violet light, for ten minutes a day from February to June, laid more than three and a half times as many eggs as the hens that got no ultra-violet light.

Well, that was the beginning. Following that other experiment stations began work on the problem. And now there is a great mass of experimental data and results on the value of vitamin D in the laying ration of the housed flock.

Now let's take up the second part of our listener's question. Here it is. "Why does a hen need vitamin D?"

We answer that part of our listener's question by quoting from Dr. Morley A. Jull who is in charge of the poultry office of the United States Department of Agriculture.

Dr. Jull says that cold, winter weather is hard on our modern American hen. Our Hen's ancestors came from a land of abundant sunshine. Laying hens need either direct sunshine or one of the sunshine substitutes. In her natural state the hen lived outdoors and enjoyed abundant sunshine. But she laid only a few dozen eggs a year.

Now compare that with our modern hen of to-day. She's not only in a colder climate where she gets less sunshine, but on top of that she's forced to lay 10 or 15 times as many eggs as her distant grandmother. Those changes have created a demand for more minerals---SHELL-FORMING minerals to wrap the extra eggs in. And anything that aids in the gathering and assimilation of shell-forming material in the hen's body is a boon to the poultryman who wants the greatest number of eggs.

That's where vitamin D rings the bell. The main function of vitamin D is to aid in the proper assimilation of minerals in the hen's body. And in doing this, it aids also in the health of the hen, in increased egg production, in the strength of the egg shells, and finally in the hatchability of the eggs. That's quite a list of honors isn't it? But that's what vitamin D does for the laying hen.

We had a neighbor in our community one time who fed his laying hens what he thought was a good ration. That ration included plenty of mash, plenty of grain, and plenty of oyster shell. But our neighbor didn't get many eggs that winter.

He knows now what the trouble was. His chickens were kept in the house. They got no direct sunshine. And his laying mash contained no cod-liver oil. In short, his hens got no vitamin D. And he got very few eggs. But when he turned his hens outdoors in the spring they started laying like they were in an egg-laying contest.

Why?

Because the ultra-violet rays in the direct sunshine aided his hens in assimilating the shell-forming materials in their bodies, and filled them with pep, and a desire to lay.

But don't misunderstand me. Vitamin D alone will not produce eggs. Vitamin D is a powerful thing, if we can call it a thing, but it can't produce an egg. It only aids in the production of eggs. But it's a big aid. If you want the greatest number of eggs you must have good hens, good feed, good houses, good management, and vitamin D.

That brings us to the most important question of all. Here it is. "How can the average poultryman supply his chickens with vitamin D this winter?" Not an easy question, is it? But it's a practical one.

Dr. Jull gave us good information on the other topic so let's go back and ring his doorbell again and ask him for information on this question. Here he comes.

There are several sources of vitamin D ---two in particular that the poultryman can use. They are: The ultra-violet rays of direct sunshine, and cod-liver oil. Sunshine is of course, the cheapest where it is available, but cod-liver oil is perhaps the most dependable for general winter use. But that's not because cod-liver oil is more powerful or more efficient than sunshine. No indeed. It's because the short, cloudy days of winter cut down the amount of desirable rays tha the hen can get from the sunlight.

Mrs. Casey Smith who lives across the street from us supplies her back-yard flock with vitamin D by exposing the layers to the direct sunshine in the middle of the day. She opens a sliding door in the south side of her laying house and drives the hens out into a protected, outdoor sun parlor where they get the full benefit of the direct rays of the sun.

W.R.B. our garden adviser uses the special glass or glass substitutes on his poultry house. That let's the ultra-violet rays through. Ordinary window glass won't do it, but this special glass, or the glass substitutes will.

Mother Thompson and I use cod-liver oil in the laying ration as we keep our hens confined. I believe we get more efficient production than other flock owners in our neighborhood.

Hens that get as much as 2 or 3 hours of direct sunshine a day get their vitamin D from that source. It's the hens that are housed and deprived of direct sunshine that suffer and need the sunshine substitutes, like cod-liver oil.

But there's a difference in cod-liver oils. Tested fresh oil is the best. And 1 per cent added to the mash is enough for the average flock of laying hens. One per cent would be 99 pounds of mash and one pound of oil. That's about what we use.

But Dr. Jull warns that the best cod-liver oil in the world won't produce eggs from old, run-down, neglected flocks. He says that you must have a combination of good chickens, good feed, and good management to make the hens fill the egg basket during the winter months.

Dr. Jull's final prescription for this month is; Good, strong, healthy birds; clean houses; no drafts; fresh water, and a good ration containing vitamin D. Get your vitamin D from any of the methods described. Take your choice. And put it in the ration now if your hens are confined.

That's all until this time next Wednesday.

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ANNOUNCEMENT: This is Station ____________in ____________________concluding the weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. Tune in for the next PRIMER. The time is ______________, that day is next Wednesda and the Station is _________________in ________________________.

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PRIMER FOR TOWN FARMERS Wednesday, December 21, 1932

FOR BROADCAST USE ONLY

Speaking Time: 10 Minutes. ALL Regions

ANNOUNCEMENT: Ladies and gentlemen, this is the last Wednesday before Christmas, and time now for Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. The subject of this week's talk is "GLADIOLUS THRIPS."

---oOo---

Gladiolus "THRIPS" is the name of a tiny insect that does heavy damage to the gladiolus crop, and causes heavy losses to the growers.

The name is thrips, spelled "T-H-R-I-P-S." And that insect attacks not only the gladiolus plant and flowers, but the gladiolus bulbs or "corms" in storage. It works the year 'round.

The gladiolus thrips is a new menace---only two or three years old. And since it is a new trouble, I'll take up the discussion step by step.

First, I'll tell you where these insects are found. Next, what they are. Then how they attack the gladiolus plants, flowers, and bulbs in storage. And finally how you can protect your gladiolus from these insects. All right, First, Where do you find these insects?---Well, the gladiolus thrips has been found in many parts of the United States and Canada during the past three seasons. It makes the most trouble in the northern and eastern parts of the United States. But the pest is increasing its range all the time. For that reason, it is well for gladiolus growers everywhere to know about this new pest and learn how to fight it. The control measures are simple. But you have to keep them up.

Now let's see just what kind of insect this is with which we have to deal. A gladiolus thrips is a very small, but extremely active insect. It is slender, too, and considerably less than a quarter of an inch long.

The pest has peculiar markings, and those markings give it away, and make it fairly easy to distinguish the gladiolus thrips from the other thrips that may also infest gladiolus.

In general the gladiolus thrips is bigger than the other thrips. It is a tiny insect that feeds on the gladiolus bulbs in winter, and on the gladiolus plants and flowers in the summer. The adult gladiolus thrips is black all over except for what looks like a cream-colored band. But it really isn't a band. The bases of the wings are cream-colored, and that gives the insect the appearance of being banded. By that peculiar marking you can distinguish the gladiolus thrips from the many other insects of that kind. The young, or lemon-colored thrips, also feed on this plant.

This pest goes through 4 stages of development--the adult stage, the egg, the larval stage, and the pupa. The adults mate in two or three days after

they emerge from the pupa stage--and egg laying begins soon after mating. Female gladiolus thrips lay eggs regardless of whether or not they are mated. And the eggs hatch, too. But if the female is unmated the young from her eggs will all be males. These mate with the parent, and in a short time you have a regular crop of both "sexes." So you see a single female gladiolus thrips can start an infestation all by herself. That has happened, too. Results of experiments by the United States Department of Agriculture show that one unmated female gladiolus thrips laid enough eggs to hatch more than 170 young larvae. So remember that one, single female gladiolus thrips can start an infestation.

The average life of one of these insects is about one month. That sounds short, but it's plenty long when you consider that a whole generation of thrips can develop in about 18 days when the temperature is as high as 70 degrees. These insects develop fast in warm temperatures, and slowly in cold temperatures.

But that's enough on the insect itself. Let's catch some of these pests at work in their attack on the gladiolus plants and flowers, and on the bulbs in storage.

Let's take a concrete example. Mother Thompson and I planted some gladiolus bulbs last spring. We plant "glads," as Mother Thompson calls 'em, every spring. But we evidently planted infested bulbs last spring because when our "glad" sprouts came through the ground they had thrips on them.

We have learned since that this insect works that way. It first attacks the bulbs in storage so that the areas fed upon become russet-colored, and it may also feed at the base of the bulbs and thus kill the young rootlets. The plants grown from infested bulbs are slower in developing and sometimes, especially if improperly stored, they won't grow at all. When the bulbs sprout, the thrips follow the sprout of the infested bulb to the surface. Once on the surface, they feed and reproduce the rest of the season on the foliage and flowers of the gladiolus plants.

Gladiolus thrips are harmful all along the line from bulb to flower. But they are most harmful to the flower----often dealing a complete "knock-out" just as the "glad" petals start to unfold.

But they don't travel from the bulb to the flower without leaving a trail. Oh, no. They leave the marks of their camp sites on the stems and leaves. Those camp sites or feeding grounds look like silver spots. If you are a close observer you can see those "silver" or bleached tracks on the foliage long before the "glad" flowers are ready to open.

Those silver spots are nothing more than dry, bleached places in the foliage where the insects have punctured the surface and sucked out the plant juices.

The plant dries out rapidly through those punctured places. It loses vigor, and the ability to grow and develop a good, strong bulb. And that, in turn, of course, affects the next crop. So I repeat again that gladiolus thrips are harmful all along the line from bulb to flower, and from flower to bulb. But as I said a moment ago they are most harmful to flowers.

They attack the stalk of the flower spike where it grows out of the last bud. Wartlike swellings develop on these injured stems as a result of feeding and egg punctures. Such stalks are usually brittle and, of course, unfit for the market. There goes the stalk!

Now for the flower itself. That's the climax, and where the thrips deal the knock-out blow. A thrips-infested "glad" that is ready to open, just doesn't open, or if it does open it's a pathetic or deformed looking flower. The edges of the petals in the unfolded bud are dry and bleached. They are prevented from expanding normally. The result is a half-opened bloom with withered petals that are bleached and full of streaks.

The bleached or streaked appearance of the petals is due to the removal of the coloring matter from the flower. The thrips ate up the coloring matter. And that type of injury is much more noticeable on the red, or purple "glads" than it is on the white or pale-colored varieties. Cut flowers in transit are also streaked in this manner by the continued feeding of the insects. So you can see that it's quite a problem.

But there is a REMEDY.

First of all, you can control the gladiolus thrips during the growing season, at least to some extent, by applying a suitable spray. But, Neighbor Thompson, you say, this is not the season for growing outdoor "glads." This is the week before Christmas. Is there anything we can do now?

Yes, there is. You can treat the bulbs. This is an ideal time to treat the bulbs in storage. By doing that you can get rid of the thrips in the bulbs now----and before they are planted next spring. And that is important, too.

Dr. C. A. Weigel, an entomologist in the Bureau of Entomology of the United States Department of Agriculture, says you can control gladiolus thrips by treating the stored bulbs this winter and spraying the growing plants next spring.

Dr. Weigel says that there are several methods of treatment. And they are all effective. The simplest way to treat stored bulbs, however, is to treat them with ordinary napthalene flakes. I suppose you know what naphthalene flakes are. They are moth-ball material in the form of flakes. And does it work?---- I'll say it does! Naphthalene flakes will drive the thrips out of "glad" bulbs in double-quick time. It not only drives the thrips out, but it kills 'em, and that's better still.

Naphthalene flakes are especially recommended for amateur gardeners. That's because naphthalene is cheap and effective, and safe both to the user and the bulbs, even when an overdose is accidentally used.

Here's the way you treat the bulbs. But don't treat freshly dug bulbs. Wait until the bulbs have been dug and stored for at least a month in a cool, dry place.

The best way to treat a small lot of bulbs is to put the bulbs in a tight paper bag, scatter the naphthalene flakes over the bulbs, and then fold over the top of the bag to keep in the fumes. Here's the dosage. Use 1 ounce of flakes for each hundred bulbs.

You can leave the naphthalene flakes with the bulbs for one month, or two or three months if you like. And you can use this treatment at any time during the storage season.

But Dr. Weigel warns that this treatment does not prevent the bulbs from getting infested again. So keep the treated bulbs in a clean, safe place until you plant them.

Remember the remedy is to treat the stored bulbs with naphthalene flakes, using 1 ounce of flakes for each 100 bulbs, and then keep the treated bulbs in a safe place away from untreated ones until you plant them.

ANNOUNCEMENT: This is Station________in________, concluding Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. For further information on the gladiolus thrips write the United States Department of Agriculture, Washington, D. C.

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PRIMER FOR TOWN FARMERS. Wednesday, December 28, 1932

FOR BROADCAST USE ONLY.

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: This is Station ______ on the air presenting the regular weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. This week's TOWN FARMER has three subjects----VEGETABLES----SHOES----and HOUSE PLANTS. We'll eat the vegetables, clean the shoes, and water the house plants. But let's eat the vegetables first.

----oooOOooo----

Most of us like to eat vegetables. Fresh vegetables make a good dish at any season of the year. They are especially good at this season.

But we haven't always had vegetables at this time of the year. Fresh vegetables used to be scarce at Christmas time. Winter was the "closed" season for fresh vegetables, in most parts of the country.

But that is not the case today. Thanks to better transportation, and improved varieties, fresh vegetables can be had the country over all the year round. They are available at practically any first class grocery store.

But since it's too cold to grow vegetables in most parts of the United States during the winter months it's interesting to find out where they are coming from at this time of the year. I did that the other day. I went shopping with Mother Thompson. I carried the market basket. And while she selected the vegetables for the Christmas dinner, I talked to the groceryman. I asked him where his fresh vegetables were coming from now.

And here's what he said: Lettuce----California. Tomatoes----California and Florida. Green peas----Mexico and California. Carrots----California. Radishes----Texas. Snapbeans----Florida. Broccoli----California. Brussels Sprouts----Louisiana. Celery----New York and Michigan. Cranberries---- Massachusetts and New Jersey. Green onions----Mississippi. New cabbage---- the Rio Grand Valley. Fancy baking potatoes from Idaho, and Persian melons from California and Arizona. There were fancy pears from Oregon, and citrus fruits from California, Florida, and south Texas.

That's only part of the long list of the fresh fruits and vegetables I found displayed in our local grocery store the day before Christmas. Many sections of the United States, Mexico, Cuba, Puerto Rico, and the Bermuda Islands were represented in that collection of fresh fruits and vegetables.

So I repeat again, that fresh vegetables can be had the country over the year round. They are available at practically all first class retail markets. Transportation and improved varieties made that possible.

And now for a problem of a different kind - the problem of getting wet, muddy shoes dry without damaging them.

The day before Thanksgiving Mother Thompson asked me to go to the garden and bring her a few sprigs of fresh parsley for the Thanksgiving turkey.

Well, I obeyed, of course. But I was in a hurry to get back to hear a certain program on the radio. And in my haste I forgot about the mud until it was too late, and my shoes -- my good shoes -- mind you, were muddy from bottom to top. So I had to clean my shoes as soon as I got to the house, and dry them by the fire. And drying wet shoes is a risky job if you don't understand it.

I've ruined good shoes by getting them wet and muddy and then drying them too fast. When wet leather gets hot, it melts. Now that may sound funny, but that's just what wet leather does when it gets hot -- it melts.

If you wear a shoe in the wet and slop for two or three hours and get it thoroughly soaked, and then set it before a hot fire or on top of a hot radiator to dry, the leather in that shoe gets just like putty. And the shoe is ruined. Or, if that doesn't happen, the leather shrinks and cracks and the shoe gets hard, tight, and out of shape. And if you want to have a perfectly miserable day, just wear a pair of ordinary shoes that have been thoroughly wet and then hurriedly dried by a hot fire. You'll never forget it.

Now if you happen to get your shoes wet and muddy this winter, or any other time for that matter, don't rush home and dry the shoes in a hurry by a quick, hot fire. That's exactly what you don't want to do. Don't dry wet shoes in a hurry, and don't dry wet shoes by a hot fire. There is a better way than that.

Here is what leather specialists of the United States Department of Agriculture say. The ideal way to handle a muddy shoe is to first, clean it. Wash off the mud and grit with luke-warm water. When the shoe is clean, grease or oil it. If it's a dress shoe that is to be polished, oil it very lightly, with castor oil only, using a small swab of cheesecloth. Don't use too much oil on a dress shoe. If you do you'll never be able to polish the shoe. So remember to oil dress shoes lightly, very lightly, if you expect to polish the shoes later.

For coarse, work shoes the specialists tell us that we can use most any kind of a good heavy non-drying animal or vegetable grease or oil. I use a mixture of plain tallow and cod oil on my coarse garden shoes. I apply that mixture while it's warm, but never hot. Hot grease or oil will ruin a shoe. If you want to play safe, apply the mixture with your hand, and let your hand be your guide. When the mixture is too hot for your hand, it's too hot for the leather.

After you've finished the greasing straighten out the shoe and stuff it with paper. That's to make the shoe hold its shape, and to dry properly. And drying is a most important thing. The leather specialists say, to dry your leather shoes slowly. Set the shoes in a place where the temperature is about like it is in an uncomfortably warm room, and where there is a good circulation of air.

Remember the warning, that when the temperature is too hot to be comfortable to the naked hand, it's too hot to dry wet shoes.

Now let's water the house plants.

Here's a letter from a listener. He says, I have a beautiful begonia in the south window of my living room. This begonia has been in the house about 2 months. Now the leaves are falling off, and the stems seem to be drying up. I water it once a week. Do you suppose it needs more water?

Of course it does! The ordinary run of house plants need water every day of the week. Mother Thompson gives her house plants a little water nearly every day. It's better to give the ordinary house plant a little water every day than it is to give it a soaking once a week. Of course you don't want to over-water. Over-watering is hard on house plants. Our rule is to give the plant enough water to keep the soil fairly moist, but not enough to run out through the drain hole at the bottom of the pot.

When Mother Thompson finds water standing in the drain saucer at the bottom of the pot, she empties the saucer right away and gives that plant no more water until the soil dries out a little and the water disappears from the drain saucer. But that only takes a day or two, and after that the plant is ready for its regular drink.

Outdoor plants have to undergo a complete change of living conditions when they are brought inside. The air on the inside is usually warm and dry. And that's hard on most plants.

If you keep your house plants too hot they'll make a soft, flabby growth. That soft, flabby growth will collapse under unfavorable conditions. Speaking from experience, I believe Mother Thompson and I get the best results when we keep our house plants at a temperature of around 60 or 65 degrees. I know we get stronger, thriftier plants at that temperature than we do when the temperature is 70 or above.

We can control the temperature easier than we can control the amount of moisture in the air. The air in the ordinary living room is generally dry. And dry air is hard on house plants, as well as people.

W.R.B. our next-door neighbor and garden adviser fills his house full of moisture with an old-fashioned teakettle. He keeps it filled and on the stove all the time in real cold weather. And I must confess that he has the finest house plants in our neighborhood. He says that it takes three things to produce good house plants during the winter months.

First, he says, give the plants the right amount of water at regular intervals, but don't over-water them.

Second, keep your plants at a medium rather than a high temperature if you can conveniently do so.

And third, keep the air fairly full of moisture when the weather is cold and you have to run hot fires.

I'm going to talk about house plants again before long, but that's all on the subject for this time. Good bye now, and good luck until this time next Wednesday.

ANNOUNCEMENT: This is Station ________ in __________ concluding the PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. Tune in again next Wednesday for the first TOWN FARMER of the New Year.